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(54) Title: A SYSTEM AND METHOD FOR ADAPTING TRANSMISSION RATE OF A MULTIMEDIA STREAMING SERVER USING A "VIRTUAL CLOCK"

(57) Abstract: A so-called "Virtual Clock" with varying frequency is provided for used by a multimedia streaming server to adapt its transmission rate dynamically to changing network conditions. The "Virtual Clock" system and method of the present invention compensates for a potential limitation of the Internet Real-time Transmission Protocol (RTP), that stamps every packet it delivers with a timestamp and expects the server using this timestamp to schedule the transmission of this particular packet accordingly. Consequently, the transmission rate is pre-determined by the encoded multimedia content when RTP is used. Using the "Virtual Clock" of the present invention, the streaming server has a mechanism to overcome this RTP limitation and can conduct transmission rate adaptation in a way that can balance the bandwidth requirement of the content with the bandwidth availability of the network.

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